Exhibit R-7

ILLINOIS-AMERICAN WATER COMPANY

Docket No. 00-0340

Rebuttal Testimony

of

Paul R. Moul, Managing Consultant

P. Moul & Associates, Inc.

Illinois-American Water Company

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REBUTTAL TESTIMONY OF PAUL R. MOUL

Q. Please state your name and business address.

A. My name is Paul R. Moul and I am managing consultant at P. Moul & Associates, Inc. My business address is Cherry Tree Corporate Center, 535 Route 38 East, Suite 200, Cherry Hill, NJ 08002-2953.

Q. Have you previously submitted testimony in this proceeding?

A. Yes. My direct testimony was included as part of the Company's case-in-chief.

SCOPE OF TESTIMONY

Q. What is the purpose of your testimony?

A. Illinois-American Water Company ("IAWC" or the "Company") has requested that I comment on and rebut the testimony presented by Mr. Michael McNally, a witness appearing on behalf of the staff of the Illinois Commerce Commission ("Staff"), and Mr. Michael Gorman, a witness appearing on behalf of the intervenor Illinois Industrial Water Consumers ("Intervenor").

Q. Have you prepared an exhibit to accompany your rebuttal testimony?

A. Yes. Exhibit R-8, which consists of five (5) schedules, was prepared in connection with my rebuttal testimony.

TESTIMONY OF STAFF AND INTERVENOR

Q. Will you identify the issues where you disagree with the testimony of the Staff and Intervenor witnesses?

A. The central rate of return areas of dispute in this case involve: (i) whether their cost of equity recommendations will be acceptable to the financial community and support reasonable credit quality; (ii) the proxy group of companies that should be considered in applying the

various models of the cost of equity, (iii) the determination of a reasonable DCF cost rate, (iv) the determination of a reasonable CAPM cost rate, and (v) the use of other methods to measure of the cost of equity. For the reasons which follow, it is my opinion that the cost of equity proposals by Messrs. McNally and Gorman are much too low by reference to alternate investment opportunities. Further, the cost of equity proposals submitted by these witnesses will not be adequate to support the Company's credit quality and provide the type of return required by investors.

Q. Why, in your view, are the recommendations of the Messrs. McNally and Gorman too low to provide an equity return that fulfills the test of reasonableness by reference to alternative investment opportunities?

A. It is my opinion that the recommendations of Messrs. McNally and Gorman fail to meet this test because they are too low by reference to the yields on public utility bonds. From the range of returns suggested by Mr. McNally, his recommendation is only 1.77% (9.9% - 8.13%) to 2.37% (10.5% - 8.13) above the yield on A rated public utility bonds that was referenced in his testimony. Likewise with regard to the testimony of Mr. Gorman, the 10.0% equity return that he suggests is only 1.87% (10.0% - 8.13%) above the yield on A rated public utility bonds. This provides wholly inadequate compensation for the higher cost of equity vis-a-vis the cost of debt.

Q. Can you demonstrate how the recommendations by the Staff and Intervenor witnesses would limit the Company's ability of attaining reasonable credit quality?

A. I have listed below the pre-tax interest coverage benchmarks established by Standard & Poor's Corporation ("S&P"), one of the major bond rating agencies, and the coverage that

could be attained from the Company's cost of equity request and those suggested by Messrs. McNally and Gorman. Pre-tax interest coverage is important because the credit rating agencies and other lenders employ coverage when measuring earnings protection for creditors. The comparisons are shown below:

	Pre-Tax Interest Coverage
"AA" Criteria	**4.0 - 3.4x**
"A" Criteria	**3.4 - 2.8x**
"BBB" Criteria	**2.8 - 1.8x**
Company's request	3.05x
Staff's position	2.81x
Intervenor's position	2.77x

The recommendation of Messrs. McNally and Gorman provide pre-tax coverage at (or below) the threshold of the A and BBB rating. With any erosion in the Company's return, the cost of capital opportunity provided by their recommendations could result in the Company being unable to attain the credit quality suggested by their recommendations.

Q. What do you conclude from the comparison shown above?

A. Based upon the recommendations of Messrs. McNally and Gorman, the level of pre-tax interest coverage would be inadequate for IAWC to attain reasonable credit quality, especially if there were any erosion in the company's return. The average bond rating for the sample water companies proposed in this proceeding is A+. Certainly, IAWC's credit quality profile should be no less than that of the water companies used to measure the Company's cost of equity. The Company needs an opportunity to experience pre-tax interest

coverage which is at or above 3 times. As opposed to this opportunity, the credit quality implied by the recommendations of Messrs. McNally and Gorman would place the Company on the cusp of the A and BBB rating. With any erosion in the Company's return, the Company would fall into the BBB category with their rate of return recommendations.

COMPARABLE COMPANIES

Q. Have proxy groups of companies been employed in this case to determine the Company's cost of equity?

A. Yes. All rate of return witnesses have used proxy groups of companies to measure the cost of equity for IAWC because the Company's stock is not traded. Mr. Gorman has considered the water companies covered by Value Line, but he has erred by not excluding E'Town Corporation. E'Town Corp. should be eliminated from Mr. Gorman's proxy group because it is now the target of an acquisition. On November 22, 1999, E'Town Corporation agreed to be acquired by Thames Water, plc, of London, England. In this acquisition, Thames offered $68.00 per share, or a 36% premium over E'Town's stock price prior to the acquisition announcement. This offer represents 264% of E'Town's book value ($68.00 â $25.75). As E'Town's stock price was $66.17 according to Mr. Gorman, that price is reflective of the take-over value of the company and not its cost of equity.

Q. Why is it necessary to exclude E'Town?

A. In an industry significantly influenced by consolidation, the stock prices of the target water companies become substantially influenced by acquisition premiums that make a cost of equity determination for those companies problematic. M&A activity has implications for the dividend yield component and the growth components of the DCF.

Q. What specific problems arise when using companies that are targets in M&As?

A. The M&A activity has a significant impact on investor expected growth. Due to the proposed acquisitions, there has been the run-up in stock prices of the water utilities related to M&A expectations, either announced or anticipated. This price action has fundamentally changed the investment horizon associated with investors' growth expectations for the water utilities. Investment horizons have shortened considerably in the context of prices offered in proposed M&A transactions. In the application of the DCF model, future returns are sometimes considered as an infinite number of growing dividends. However, when a company is the target of an acquisition, such as E'Town Corp., a more defined number of cash flows is reflected in the stock price with particular emphasis being placed on the acquisition price (i.e., the liquidating dividend) of the stock. That is to say, today's stock price is the product primarily of the buy-out price of the stock and not an infinite dividend stream. As such, the long-term horizon of future dividend payments ceases to be the focus of investors. Rather, the acquisition price becomes the paramount consideration because the future value of the stock is established by reference to the acquisition price along with dividend payments that occur up to the time the company is acquired and its stock no longer trades.

Further, when a premium is offered to obtain control of a target company and to induce existing stockholders to sell their shares, the stock price disconnects from the earnings forecasts made by securities' analysts when the target company operated independently. After the combination occurs in the merger/acquisition, the surviving company will be able to attain increased shareholder value through economics of scope and

scale that increase productivity and profitability to the point where earnings growth will exceed that which was attainable by the pre-merger company. Synergies, such as those mentioned above, are the reason that acquiring companies can offer premiums over pre-announcement stock prices and still anticipate that the acquisition will be accretive to earnings and add shareholder value. Otherwise, acquisitions at premiums would not be economically feasible. While the circumstances described above apply directly to target companies that have agreed to be acquired, similar expectations are reflected in the stock prices of other water utilities that represent potential candidates for acquisition. That is to say, the stock prices of many water utilities include some expectation that they may become the target of a takeover during the consolidation of the industry. Stated another way, the price of many water company stocks reflect some expectation related to M&A activity, just as a rising tide lifts all boats.

Q. If E'Town were excluded from Mr. Gorman's sample, what would his DCF and CAPM calculation be?

A. By excluding E'Town from Mr. Gorman's cost of equity calculations, his recommendation would change as follows:

Original	Revised
9.98%-10.1%	10.14%-11.24%
10.0%	10.7%

Q. Do you have problems with Mr. McNally's sample of water companies and sample of comparable utilities?

A. Yes. Both of Mr. McNally's samples contain three water companies which significantly skew downward his recommendation. These companies are: Connecticut Water Service, Middlesex Water, and Pennichuck.

Q. What has caused this to occur?

A. These companies introduce a downward pressure in Staff's DCF results. As calculated by Mr. McNally, each of the DCF results are less than his acknowledged cost of A rated public utility bonds of 8.13%. The cost of equity cannot be lower than the cost of debt because the higher risk of equity mandates that its cost must exceed the cost of debt by a meaningful margin. Unfortunately, Mr. McNally's figures show:

Connecticut Water Service	6.96%
Middlesex Water	7.69
Pennichuck	7.22

In fact, Connecticut Water Service has a DCF value about equal to IAWC's embedded cost of long-term debt. In my opinion, it is erroneous to include these three companies in Staff's sample because these results produce DCF values less than the cost of debt.

Q. If these three companies were excluded from the samples, how would the DCF calculations change?

A. Using Staff's calculation of the DCF results, the removal of the three companies provide the following:

	Original Staff DCF	Revised Staff DCF
Water Company Sample	9.16%- 9.93%	10.56%-11.90%
Comparable Sample	9.88%-10.58%	11.17%-12.23%
DCF Average	9.9%	11.5%

Q. How would the revised Staff DCF calculation change Staff's cost of equity calculation?

A. Assuming no change to Staff's risk premium calculation, Staff's cost of equity would change as follows:

	Original Staff DCF	Revised Staff DCF
Range	9.9%-10.5%	10.5%-11.5%
Midpoint	10.2%	11.0%

Q. Have you provided a calculation that how Staff unintentionally has introduced a bias into its DCF result by giving undue weight to the DCF values for the three companies?

A. I have prepared page 1 of Schedule 1 of Exhibit R-8 to show mathematically how Mr. McNally arrived at his 9.89% DCF result (see ICC Staff Exhibit 3.0, page 25 line 472). There it is shown how Staff has introduced a severe downward pressure in its recommendation by giving undue weight to the extremely low DCF results that are less than the cost of debt. I show on page 1 of Schedule 1 of Exhibit R-8 that Staff has assigned 38.10% weight to the three DCF values that are less than the cost of debt.

Q. What has caused this to occur?

A. Mr. McNally has counted the results for Connecticut Water Service, Middlesex Water, and Pennichuck Corp., multiple times in his analysis. First, he has doubled up on the results for these companies by including them in both his Water Utility Sample and Comparable

Sample proxy groups. Second, he has further doubled up the results for these companies by including the DCF results in both his "Low-End Estimate" and "High-End Estimate." Since Staff's "high end" DCF values on Staff Schedule 3.8 are supposed to reflect the high estimates, it is not appropriate to include the low-end estimates as part of the high-end estimates. If the low-end estimates are eliminated from the high-end estimates, Staff's DCF calculation becomes 11.01%. Assuming no change to Staff's calculation of the risk premium value, the revised cost of equity would change as follows:

	Original Staff DCF	Revised Staff DCF
Range	9.9%-10.5%	10.5%-11.0%
Midpoint	10.2%	10.8%

Q. If equal weight were given to each of Staff's DCF calculations, what would the result be?

A. I prepared page 2 of Schedule 1 of Exhibit R-8 which shows the outcome by equally weighting each of Staff's separate DCF calculations. In this circumstance, the three extremely low DCF results are given no more than a combined 20.01% weight, rather than the 38.10% weight accorded to them in the Staff's recommendation. Under equal weighting, the Staff's DCF calculation would be 10.60%, as shown on page 2 of Schedule 1 of Exhibit R-8, assuming none of the companies were excluded from the Staff's samples. Here, each of Staff's DCF calculations are only counted one time.

Moving one step further, I have prepared page 3 of Schedule 1 of Exhibit R-8 that removes the three DCF results that are less than the cost of debt. There, the outcome would produce an 11.43% return.

Q. How would these revisions change Staff's cost of equity calculation?

A. Assuming no change to Staff's risk premium calculation, Staff's cost of equity would change in the following manner:

	Original Staff DCF	Revised Staff DCF	Second Revised Staff DCF
Range	9.9%-10.5%	10.5%-10.6%	10.5% - 11.43%
Midpoint	10.2%	10.6%	11.0%

COST OF EQUITY MEASUREMENT PERIOD

Q. Is the selection of the market data important to the measurement of a company's cost of equity?

A. Yes. Mr. McNally's testimony considered price data as of a single date, i.e., August 9, 2000. Use of a price from one particular date invites all sorts of problems. First, a single day's price can produce an anomalous outcome because it is subject to the vagaries of the market. Second, the use of a single day's price is dependent upon the time when the analyst decides to prepare his/her study. Third, using a single day's price introduces gamesmanship into the rate of return. Given the wide swings in share values and the overall financial market uncertainty experienced over the past several years, a longer measurement period would provide a sounder basis for a rate of return recommendation. Indeed, Staff witness Mr. McNally has used a thirteen-month average for developing the Company's capital structure -- not a one-day capital structure.

Q. What measurement period was used by Mr. Gorman in his analysis?

A. Mr. Gorman has used a thirteen week period to measure the stock price for calculating his dividend yields. While this is an improvement over the use of spot prices, a longer 6-month average would be a better choice in this regard.

Q. In your opinion, what period of time should be used to measure stock prices?

A. As I indicated in my direct testimony, a representative dividend yield should reflect a six-month average. A six-month measurement period is commonly used for selecting stock prices in a DCF analysis. A six-month average would add stability to the result and better fits the long-term view of public utility ratesetting.

DISCOUNTED CASH FLOW

Q. What form of the DCF model has been employed in this case?

A. The constant growth or "Gordon" form of the DCF model has been used by Messrs. McNally, Gorman and me. It must be recognized, however, that the "Gordon" form of the DCF model is not without its limitations because many of the assumptions which must be made to utilize this model are simply not realistic. It must be remembered that according to the theory of the constant growth form of the DCF, future earnings per share, dividends per share, book value per share, and price per share will all appreciate at the same constant rate absent any change in dividend payout and price-earnings multiple. There is no evidence that these conditions actually prevail in the equity markets. Indeed, the evidence shows that these steady-state (i.e., constant growth) conditions represent unrealistic assumptions of investor expectations. With declining dividend payout ratios, earnings per share and price

appreciation (i.e., the capital gains yield, or growth component of the DCF) will be at a higher rate than dividend growth in the future for the water companies.

I should further explain that there is an element of circularity in the DCF model when applied in rate cases. This is because investors' expectations for the future depend upon regulatory decisions. Therefore, the use of the DCF in rate cases ensures that regulators will continue to provide high growth companies with a return which sustains that performance. On the other hand, the use of the DCF for low growth companies perpetuates that performance and hinders any improvement. Due to this circularity, the DCF model may not fully reflect the true risk of a regulated firm.

Q. Mr. Gorman claims that it is not a problem. Please respond.

A. Mr. Gorman claims, without any empirical support, that no matter what the equity return is set by regulators, investors will increase or decrease the stock price and thereby hold the required return the same. Mr. Gorman offers no proof that the change in dividend yield and growth rate would precisely offset in these circumstances, and indeed, investors may react to a rate case decision quite differently than the analysis making the forecasts.

Q. Do you have specific concerns regarding the DCF model?

A. In order for an analyst to properly apply the DCF method, he/she must be sensitive to a particular company's capital needs, risk profile, and credit quality considerations. Failure to consider these important factors will be unfair to the utility and will lead to a higher future cost of capital (both debt and equity). This is because the cost of capital, like other items of revenues, expenses and investment, must be reflective of the conditions which will prevail during the effective period of the proposed rates. If the DCF approach cannot cope with

general capital market fundamentals, then either the assumptions underlying the DCF method are incomplete or the approach is not being properly implemented. Finally, the fallacy of excessive reliance upon the DCF model is shown by individual results which provide figures which cannot realistically represent a fair rate of return on common equity. This becomes particularly apparent for Mr. McNally when three of his DCF results are less than the cost of debt. That is to say, Mr. McNally's mechanical approach to the DCF produces wholly unrealistic results -- instances where the calculations show returns as low as 6.96%, 7.22% and 7.69%. Mr. Gorman also provides a DCF calculation that shows a 6.21% result, but as I indicated previously, this error can be traced to the elevated price of E'Town Corp. which is related to its pending acquisition by Thames Water, plc. Any calculation that suggests that the cost of equity could be as low as 6.12%, 6.96%, 7.22% and 7.69% does not conform with investor expectations in the context of alternative investment opportunities. As previously noted, Mr. McNally has indicated that A rated public utility bonds provide a yield of 8.13%. The cost of equity must exceed this yield by a meaningful margin.

Q. As to the DCF growth component, what financial variables should be given greatest weight when assessing investor expectations?

A. The theory of DCF indicates that the value of a firm's equity (i.e., share price) will grow at the same rate as earnings per share and dividend growth will equal earnings growth with a constant payout ratio. Earnings per share growth is the primary determinant of investor expectations concerning their total returns in the stock market. This is because the capital gains yield (i.e., price appreciation) will track earnings growth with a constant price earnings

multiple (a key assumption of the DCF model). It is important to recognize that analysts' forecasts significantly influence investor growth expectations (see pages 46 and 47 of my direct testimony Exhibit 7.0). Moreover, it is instructive to note that Professor Myron Gordon, the foremost proponent of the DCF model in rate cases and the individual whose name is most commonly associated with the DCF model, has determined that the best measure of growth in the DCF model is analysts' forecasted earnings per share growth[1]. Hence, to follow Professor Gordon's findings, earnings per share forecasts must be given primary weight.

Q. Have Messrs. McNally and Gorman erred by not considering all relevant earnings per share forecasts?

A. Yes. It is important to consider all elements that influence investor-expectations. It matters not what the practitioner thinks, but rather the data that investors use when they price stocks. Hence, to the extent that Value Line's earnings forecasts influence investor expectations, it is essential that those forecasts be incorporated in the DCF model. Messrs. McNally and Gorman have not incorporated the Value Line earnings per share forecasts into their DCF calculations. The Value Line Investment Survey is the most widely distributed source of investment advise covering over 1,700 companies in its primary publication spanning over 90 different industries. In a testimonial to Value Line by one of America's most famous investors, Warren Buffet indicated that Value Line delivered "incredible value" and was "enormously efficient," and he commented that "I don't know of any other system that's as

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1 "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989 by Gordon, Gordon & Gould.

good." Moreover, the world renowned Professor of Finance, Fischer Black, at the University of Chicago Graduate School of Business stated:

> "It appears that most investment management organizations would improve their performance if they fired all but one of their security analysts and then provided the remaining analyst with the Value Line service."

There is just no reason to ignore the Value Line forecasts in a DCF analysis. To ignore the Value Line forecasts would invite a misspecification of the cost of equity in this case.

Q. What would be the DCF results if the Value Line forecast of earnings per share growth were included directly in the DCF calculations?

A. Schedule 2 of Exhibit R-8 provides the earnings per share growth rates by including the Value Line forecasts along with those available from IBES and Zacks. Page 1 of Schedule 3 of Exhibit R-8 shows that the DCF results would be 10.55% for Mr. McNally's Comparable Sample group of utilities, 9.80% for Mr. McNally's Water Utility Sample, and 11.19% for Mr. Gorman's Comparable Group after eliminating E'Town Corp. Page 2 of Schedule 3 of Exhibit R-8 shows that after eliminating the three water companies that show DCF results below the cost of debt, the DCF results would be 12.17% for Mr. McNally's Comparable Sample and 11.66% for his Water Utility Sample.

Q. Of the DCF results shown on Schedule 3 of Exhibit R-8, which one would be most relevant to a determination of the Company's cost of equity?

A. The results of Mr. Gorman's Value Line group should be used after eliminating E'Town Corp. Those DCF results are 11.19% and do not include the results for Connecticut Water Service, Middlesex Water, and Pennichuck Corp. that erroneously indicate that the cost of equity could be less than the cost of debt.

CAPITAL ASSET PRICING MODEL

Q. Each of the witnesses has used the CAPM as a measure of the Company's cost of equity. Do you have any concerns regarding the application of the CAPM by Messrs. McNally and Gorman?

A. I have two problems with each of the applications of the CAPM as proposed by Messrs. McNally and Gorman. For Mr. McNally, these problems include (i) his use of betas that do not conform with the data used by investors and (ii) his indecisiveness surrounding the selection of the risk-free rate of return. For Mr. Gorman, the two problems involve (i) his use of out-of-date betas and (ii) a market premium that is too low.

Q. Please explain the two problems that you have detected in Mr. McNally's application of the CAPM?

A. First, and most important, Mr. McNally has not used the betas that investors would employ when valuing these companies' common stocks. I seriously doubt that any investor has consulted with Staff about its betas when considering the addition of any of these stocks to their portfolios. As I indicated earlier, the only data that is relevant to a determination of the

investor-required return is data actually used by investors. Mr. McNally has provided no evidence that any investor has ever used the betas that Staff has computed.

Second, Mr. McNally seems tentative concerning his selection of either short-term Treasury bills or long-term Treasury bonds as his basis for determining the risk-free rate of return. Mr. McNally developed his risk-free rate by using Treasury bonds, which he stated was the best proxy for a risk-free security. There are two problems with his selection. First, the yield on Treasury bonds has been distorted by the fact that the Treasury has been issuing fewer new bonds and redeeming bonds that are already outstanding. The growing scarcity of bonds has caused their price to increase and their yield to fall. These factors are revealed graphically by data shown on Schedule 4 of Exhibit R-8. As shown on that schedule, the interest rate spread between the yields on 30-year Treasury bonds and A rated public utility bonds has expanded from unusually high levels that I described in my direct testimony. This very large spread can be traced to the factors listed above and continues to point to the high cost of corporate capital vis-a-vis the yield on Treasury bonds. I have been informed that Staff has traditionally used short-term Treasury bills for its measure of the risk-free rate of return. If Staff had followed that approach in this case, its CAPM result would have been 10.78% using Staff's betas that are shown on ICC Staff Exhibit 3.0, Schedule 3.9. Also, in a prior rate order in Docket No. 94-0481, the Commission found that the yields on Treasury bills should be given 75% weight and yields on Treasury bonds should be given 25% weight when calculating the risk-free rate of return. If that 75/25 weighting were used in the CAPM calculation, the Staff's midpoint CAPM result shown on ICC Staff Exhibit 3.0, Schedule 3.9

would be 10.7% which represents the average of 10.75% and 10.65% using the Staff betas shown on ICC Staff Exhibit 3.0, Schedule 3.9.

Q. How would you remedy the shortcomings of Mr. McNally's application of the CAPM?

A. As to betas, the Value Line publication represents the obvious choice for the beta component of the CAPM. As previously noted, Value Line is probably the most widely used source of investment advice. As shown on Exhibit R-8, Schedule 5, I have provided the Value Line published betas that provide the measure of systematic risk that influence the investors in water utility common stocks. [2]

As to the second issue, the 75/25 weighting of the yields on Treasury bills and bonds would provide a 6.25% risk-free rate of return. ((6.40% (.75) + (5.81% (.25)).

Q. Please explain your concerns regarding the CAPM application by Mr. Gorman.

A. First, I am somewhat perplexed by Mr. Gorman's use of May 5, 2000 Value Line betas, when his basic source of data in his testimony included stock prices through August 7, 2000 and the IBES publication on August 17, 2000. I see no reason to avoid the Value Line betas dated August 4, 2000. In that publication, the beta increased to .65 for American States Water Co. and to .60 for California Water Service Group. This would increase Mr. Gorman's group average beta to .57, even with the continued inclusion of E'Town Corp.

Second, Mr. Gorman has adopted a market premium that implies a total market return of 13.0% (6.0% + 7.0%) to 13.8% (6.0% + 7.8%). It appears to me that he has mis-calculated the total market return for the S&P 500. The total market return is 16.24%

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2 As shown on Exhibit R-8, Schedule 5, the Value Line betas for all available companies are .54 of the Water Sample and .55 for the Comparable Sample. Excluding Connecticut Water Service, Pennichuck, and Middlesex for reasons previously explained, the resulting betas would be .58.

according to Mr. McNally. Mr. Gorman's market premium should be 10.24% (16.24% - 6.00%).

Q. Please provide the CAPM results revised for the items that you discussed above.

A. Using the Value Line betas[3] and the Commission 75/25 weighting of the yields on Treasury bills/bonds for the risk-free rate of return, Mr. McNally's CAPM should be revised in the following manner:

	Rf	+	*(Rm - Rf)*	=	*k*
Water Sample	6.25%	+ .54	(16.24% - 6.25%)	=	11.64%
Comparable Sample	6.25%	+ .55	(16.24% - 6.25%)	=	11.74%

For Mr. Gorman's Group, it is necessary to remove E'Town Corp. for reasons previously explained. The resulting CAPM should be revised in the following manner:

	Rf	+	*(Rm - Rf)*	=	*k*
Value Line Group	6.0%	+ .59	(16.24% - 6.0%)	=	12.04%

Q. With the revision that you have discussed concerning the DCF and CAPM applications by Mr. McNally, what would be the cost of equity for the Company?

A. I have revised the results for Mr. McNally's DCF and CAPM approaches for the reasons that I previously explained. At a minimum, the Staff's approach must be revised to remove the downward skewing that is reflected by the extra weighting that was assigned by Mr. McNally to the DCF results that are less than the cost of debt. The DCF results shown on page 2 of Schedule 1 of Exhibit R-8 remove this skewing. Further, the CAPM results

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3 Working with the Value Line betas of .58 for the Water Sample and Comparable Sample after removing Connecticut Water Service, Pennichuck, and Middlesex, the resulting CAPM would be: 6.25% + .58 (16.24% - 6.25%) = 12.04%.

should be revised to reflect the Commission's weighting of 75/25 on Treasury bills/bonds as I indicated on page 16 of my rebuttal. The resulting comparisons are:

	Equal Weighting of DCF Results and Commission Weighting of Rf	
	Original Staff DCF	Revised Staff DCF
Range	9.9%-10.5%	10.6%-10.7%
Midpoint	10.2%	10.7%

While the revisions shown above represent the bare minimum that should be taken as a step toward providing the Company with a fair rate of return, the Commission should also consider the other revisions that I have proposed in my rebuttal testimony.[4] To fully reflect a comprehensive revision of the Staff's presentation in this case, the DCF results should reflect all available analysts' forecasts – especially those from Value Line, the removal of DCF results that produce returns that are less than the cost of debt, and a CAPM calculation that reflects the Value Line betas which investors would use when making their judgments of the systematic risk of a stock. Those results are represented by the midpoint of the DCF results shown on page 2 of Schedule 3 of Exhibit R-8 and the CAPM calculations shown on page 19 of my rebuttal. The comparisons are:

4 Other instances that show Staff's recommendation is too low are exemplified by revisions that would remove the results of the three companies showing a DCF cost rate less than the cost of debt which would result in 11.5%, which along with the CAPM of 11.7% would produce a 11.6% midpoint. Further, removing the "Low-End Estimate" from the "High-End Estimate" in the DCF calculation would provide an 11.0% return, which together with the 11.7% CAPM result would provide an 11.35% midpoint.

	Using all Growth Rate Estimates and Value Line betas	
	Original Staff DCF	Revised Staff DCF
Range	9.9%-10.5%	11.7%-11.9%
Midpoint	10.2%	11.8%

Q. Will you summarize the revisions that are necessary concerning the testimony submitted by Mr. Gorman?

A. Mr. Gorman's DCF and CAPM results must be revised to remove E'Town from his group, must reflect growth rate forecasts from all sources including: Value Line, I/B/E/S and Zacks, the use of the latest Value Line betas, and a market return that fits realistic expectations of investors.[5] Along these lines, the DCF results shown on page 2 of Schedule 3 of Exhibit R-8 should be used together with the CAPM results that I show on page 18 of my rebuttal. The comparisons are:

	Original Intervenor DCF	Revised Intervenor DCF
Range	9.98%-10.10%	11.19%-12.04%
Midpoint	10.0%	11.6%

RESPONSIVE TESTIMONY

Q. Please respond to Mr. McNally's criticism concerning your use of historical data?

A. Historical data is the most widely analyzed data for investigating and testing theories explaining the functioning of the capital markets. Indeed, most of the notable academic research has used historical data in this regard. Indeed, in the recent Fama/French studies

[5] Even if the only changes were to remove E'Town from Mr. Gorman's DCF calculation and to use the latest Value Line betas in his CAPM calculation, the results would be 11.24% for DCF, 10.37% for CAPM, and a midpoint of 10.8%.

that have received wide- spread attention, 28 years of historical monthly data was used in this research. Moreover, I doubt that any serious investor would commit to a common stock investment without first apprising himself/herself of the historical performance of a company. Lastly, Mr. McNally has used historical data extensively in the process of selecting his comparable utility companies.

Q. How is historical data useful in measuring the dividend yield component of the DCF?

A. As previously explained, the use of an average helps deal with the vagaries of the market which can produce anomalous results when spot, or one-day stock prices are used in the DCF. Moreover, historical data is more reflective of the types of data used in utility ratesetting and avoids the gamesmanship that can occur with the use of spot data.

Q. Mr. McNally also complains about the use of historical data in your CAPM and Risk Premium analyses. Please respond.

A. First, if it is accepted that the market for equities is informationally efficient, at least in the long- run, then investor expectations for the future can be discerned from past data. That is to say, 71-years of data contains so much information about investor expectations that it is doubtful that future market returns have not already been captured by the historical data.

Q. Please respond to Mr. McNally's criticism of your Risk Premium analysis?

A. First, the historical data that I used for developing the equity risk premium for the S&P Public Utilities is entirely appropriate for reasons explained above. Second, the A bond rating provides the most common representation of the credit quality rating for investment grade public utility bonds. Indeed the average bond rating for the companies in the S&P Public Utilities index is A. Moreover, the Lehman Brothers index of public utility bond

returns includes investment grade rated bonds -- the most common rating being A for that category. Third, I have specifically tailored my equity risk premium to the market fundamentals most likely to exist for the future. It is for this reason that I gave greatest emphasis to the more recent data covering the periods 1974-1999 and 1979-1999. As to my selection of a utility equity risk premium, I have taken a balanced approach by utilizing a premium for the S&P Public Utilities which is between the lowest premium and the highest premium.

Q. Please respond to Mr. McNally's assertion that your risk premium calculations for the S&P Public Utilities may be overstated by approximately 70 basis points.

A. The data and underlying calculations that support my risk premium calculation for the S&P Public Utilities have been repeatedly scrutinized by various staff analysts and intervenors' consultants for over 15 years. While the conclusions that I have drawn from these data may have been disputed by opposing parties, the underlying data and calculations have not been challenged. Indeed, with exception of one year-end index value, Mr. McNally and I are in agreement as to the basic data that underlies the values for the S&P Public Utilities. The basic difference relates to the methods used to calculate the annual returns. My calculations use a more detailed monthly approach whereby the annual return is represented by the geometric progression of the actual monthly returns. This procedure conforms with the theoretically correct method that is detailed in the Ibbotson & Associates publication Stocks, Bonds, Bills and Inflation. Mr. McNally has employed an abridged approach using annual data that is less detailed and does not conform with the generally accepted manner in which

total market returns are usually calculated. For this reason, Mr. McNally's calculations provide only a rudimentary representation of the actual market returns.

Q. Both Mr. McNally and Mr. Gorman have complained about your leverage-adjusted DCF and leverage-adjusted betas. Please comment.

A. I have explained in my direct testimony the reasons that the regulatory determined cost of equity must be adjusted for the book value measures concerning the market models, such as DCF and CAPM. The Hamada formula that I used to adjust the betas is merely an extension of the Modigliani and Miller formula that I used in the DCF calculation. It must be recognized that in order to make the DCF and CAPM results relevant to the rate base measured at original cost, the market derived cost rate cannot be used without modification. My adjustment comes into play when market values exceed book values, thereby indicating less leverage when measured with market values than that which exists in a capital structure that is measured with book values. As a factual matter, Messrs. McNally and Gorman do not dispute the fact that, using the market values, my Water Group had a 63.62% equity ratio and my Public Utility Group had a 66.24% equity ratio. Those ratios compare with an equity ratio measured at book value of 47.07% for the Water Group and 49.19% for the Public Utility Group. The DCF and CAPM calculation represents the returns that investors expect on their market value, and it is not a book value determined return. My adjustment is necessary to convert the market returns related to price into earned returns related to book value. My leverage adjustment is not intended, nor was it designed, to address the reasons that stock prices are different from book values.

Q. Both Messrs. McNally and Gorman challenge the value of your Comparable Earnings approach. Please comment.

A. The Comparable Earnings approach was established in the landmark Bluefield & Hope decisions, which set forth the two principal standards of a fair return, namely, comparability and capital attraction. In the Hope decision, the United States Supreme Court defined these requirements as: "...by that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital." The Comparable Earnings approach directly considers those requirements and, in addition, has considerable intuitive appeal because it fits the established standards for a fair rate of return set forth in the Bluefield and Hope decisions. This approach has been used by me in connection with the other market models (i.e., DCF, Risk Premium, and CAPM) and the combined results of all methods fulfill both established standards of a fair rate of return. The financial community has expressed the view, as indicated by a noted Merrill Lynch analyst, that the regulatory process must consider the returns that are being achieved in the non-regulated sector to ensure that regulated companies can compete effectively in the capital markets.

The underlying premise of the Comparable Earnings method is that regulation should emulate results obtained by firms operating in competitive markets and that a utility must be given an opportunity cost of capital equal to that which could be earned if invested in firms of comparable risk. Further, given the 10 year time frame (i.e., five years historical and five years projected) considered by this study, it is unlikely that the earned returns of

non-regulated firms would diverge significantly from their cost of capital. For non-regulated firms, the cost of capital concept is used to determine whether the expected marginal returns on new projects will be greater than the cost of capital, i.e., the cost of capital provides a hurdle rate for new projects. Since the Comparable Earnings method is derived from a firm's overall performance (i.e., its average return), it is likely that the approach has measured blended returns on a variety of projects that have produced returns above and below the cost of capital during the measurement period.

Q. Please respond to Mr. McNally's criticisms concerning your size adjustment?

A. First, Mr. McNally says that the Company's parent, American Water Works ("AWW"), should serve as the basis for the size adjustment. The market capitalization of AWW was $2.7 billion which places it in the third decile of companies on the NYSE, which makes it a mid-cap company. The mid-cap adjustment is 0.19%. Yet, I find it curious that Mr. McNally has not used AWW as his sole basis to measuring the Company's cost of equity. As to Mr. McNally's other complaints, I have already addressed the issue of historical-based data and will not repeat my response here. Second, utilities were included in the Ibbotson analysis of the returns on stocks listed on the NYSE, thereby negating Mr. McNally's criticism of that issue. Finally, the adjustment for the betas relates to regression bias and has nothing to do with the issue of size.

SUMMARY

Q. Please summarize your rebuttal testimony.

A. In my opinion, the rates of return recommended by Messrs. McNally and Gorman have significantly understated the Company's cost of capital. Their returns are too low by reference to the returns on alternative investment opportunities. In addition, the revisions that were necessary for their analysis significantly boost their results for each of their methods/models. The Company has requested 11.25%, as stated in my direct testimony. I point out that, if Staff's presentation and Intervenor's presentation are corrected fully, Staff's and Intervenor's revised calculations support the Company's requested return on equity.

Q. Does this conclude your rebuttal testimony?

A. Yes.